

From Griffiths: 2.39, 3.3, 3.6, 3.7, 3.12, 3.15

1. A capacitor is made of two concentric, conducting spherical shells. Initially, the inner shell, of radius a , is grounded and the outer shell, of radius b , is at potential V .
 - (a) What is the capacitance of this system?
 - (b) Then the inner shell is removed. What is the inner shell is ungrounded and the shells are connected by a wire. What is the final potential of the shells?
2. Two semi-infinite, grounded conducting planes intersect and make an angle of 60 degrees. One plane is on the x -axis. A point charge $+Q$ is located between the planes, closer to one plane than the other, at coordinates $x=b$, $y=a$. Find the images needed to satisfy the boundary conditions. What other angles would this method work for?